

REMARKS

Claims 1-16 and 22 were pending, of which Claims 9-16 were indicated as being allowable, Claims 1-3, 7, 8, and 22 were rejected and Claims 4-6 were objected to. Claims 4, 5, and 22 have been amended and Claims 24 and 25 have been added. Support for the amendment to Claims 4 and 5 is found in, e.g., paragraphs 0037-0040 of the present application. Support for new Claims 24 and 25 is found, e.g., at paragraph 0021. Thus, no new matter is added.

Claim Rejections – 35 U.S.C. §102

Claims 1 and 22 were rejected under 35 U.S.C. §102(b) as being anticipated by Hennessey et al. (5,696,835) (“Hennessey”). Applicant requests reconsideration.

Claim 1 recites a “method for forming a recipe for de-skewing wafers” that comprises “learning a first pattern at a de-skew site on a first wafer layer; saving the first pattern and its location in a recipe for de-skewing wafers; learning a second pattern at the de-skew site on a second wafer layer; and saving the second pattern in the same recipe for de-skewing wafers.” Clearly, Claim 1 is related to de-skewing wafers and includes learning a first pattern and a second pattern at “a de-skew site” and saving the patterns in “a recipe for de-skewing wafers”.

As is well known in the art, and as discussed in the specification, “[d]e-skewing is a method to correct the offset” of the position of a wafer that is loaded onto a stage. Paragraph 0005, and see, paragraph 0006. Hennessey is **not** related to de-skewing a wafer. Figs. 9-12 of Hennessey, cited by the Examiner, are related to measuring the “amount of misalignment or misregistration” between two layers on the wafer. Col. 9, lines 25-27 and col. 9, lines 46-47. In other words, Hennessey is measuring the relative displacement between a first layer on a wafer and a second layer. De-skewing and measuring misregistration between layers are two fundamentally different things.

Because Hennessey is related to measuring the alignment discrepancy between two layers on a wafer, Hennessey does not teach or suggest learning first and second patterns at a “de-skew site” or saving the first and second patterns in a “recipe for de-skewing wafers”.

Accordingly, Applicant respectfully submits that Claim 1 is patentable over Hennessey. Reconsideration and withdrawal of this rejection is respectfully requested. New Claim 24 depends from Claim 1 and is therefore likewise patentable for at least the same reasons.

Claim 22 has been amended to recite “using said first pattern to de-skew a wafer by comparing the first pattern to the de-skew site on the first wafer layer and using said first pattern to de-skew the wafer at a later time by comparing the first pattern to the de-skew site on the second wafer layer when the first pattern matches the second pattern”. Support for the amendment to Claim 22 is found, e.g., in Figs. 1 and 4, and the accompanying text, including, for example, paragraphs 0036 and 0056-0058. Thus, no new matter has been added.

As discussed above, Figs. 9-12 of Hennessey are related to determining the “amount of misalignment or misregistration” not to de-skewing a wafer as recited in Claim 22. Col. 9, lines 25-27. To determine the misregistration, Hennessey teaches that the first target and second target are imaged simultaneously (see, col. 9, lines 54-60) and the “relative displacement between the first target 158 and the second target 160 is ... determined by calculating the relative displacement of the first target primitives from the second target primitives in symbolic space (block 176).” Col. 10, lines 1-4. Hennessey does not teach or suggest that “using said first pattern to de-skew a wafer by comparing the first pattern to the de-skew site on the first wafer layer and using said first pattern to de-skew the wafer at a later time by comparing the first pattern to the de-skew site on the second wafer layer when the first pattern matches the second pattern” as claimed in Claim 22.

Thus, Applicant respectfully submits that Claim 22 is patentable over Hennessey. Reconsideration and withdrawal of this rejection is respectfully requested. New Claim 25 depends from Claim 1 and is therefore likewise patentable for at least the same reasons.

Claim 1 was also rejected under 35 U.S.C. §102(e) as being anticipated by Michael et al. (6,240,218) (“Michael”). Reconsideration is requested.

Applicant disagrees with the Examiner’s characterization of Michael. Fig. 14 of Michael is not related to “forming a recipe for de-skewing wafers” but is related to the “run-time phase” in which “the translational and rotational alignment” is found. Col. 7, lines 34-38. Michael states that “to accomplish this, the run-time phase uses the result of the training phase that is, the template image [created in Fig. 11], to find the features on the wafer....” Col. 41-45. Thus, Fig. 14 simply discloses matching the 1-D template image (from Fig. 11) to the 1-D feature image (formed in step 156 of Fig. 14) to find relative displacement of maximum match value.” Accordingly, Michael does **not** disclose “learning a first pattern at a de-skew site on a first wafer layer” and “learning a second pattern at the de-skew site on a second wafer layer”.

Thus, Applicant respectfully submits that Claim 1 is patentable over Michael. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim Rejections – 35 U.S.C. §103

Claims 2, 3, and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Michael in view of Garakani et al. (6,240,208) (“Garakani”). Applicant respectfully traverses.

Claims 2, 3, and 7 depend from Claim 1. Garakani fails to make up for the deficiencies of Michael. Accordingly, Claims 2, 3, and 7 are allowable for at least the same reasons as Claim 1.

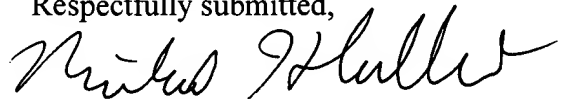
Claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over Michael in view of Weinzimmer et al. (6,681,151) (“Weinzimmer”). Applicant respectfully traverses.

Claims 8 depends from Claim 1. Weinzimmer fails to make up for the deficiencies of Michael. Accordingly, Claim 8 is allowable for at least the same reasons as Claim 1.

Claims 4, 5, and 22 have been amended and Claims 24-25 have been added, leaving Claims 1-16 and 22-25 pending, of which Claims 9-16 were indicated as being allowable. For the above reasons, Applicant respectfully requests allowance of Claims 1-16 and 22-25. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 982-8202.

**Via Express Mail Label No.
EV 652 161 676 US**

Respectfully submitted,



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